

## From 'Forgotten' to 'Flagship': getting Leadbeater's Possum back into the spotlight

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### Abstract

This paper focuses briefly on Victoria's Faunal Emblem, Leadbeater's Possum *Gymnobelideus leadbeateri*, and on the community group Friends of Leadbeater's Possum (FLbP) that was formed to help protect the threatened species. A chronology is presented that lists actions taken by FLbP, separately or in conjunction with other groups, since its inception in 2004. Related events that have impacted on the habitat of Leadbeaters Possum are included. (*The Victorian Naturalist* 130 (4) 2013, 174–177)

**Keywords:** Leadbeater's Possum

### Leadbeater's Possum

#### History

Leadbeater's Possum *Gymnobelideus leadbeateri* was discovered near Bass River, south Gippsland, in 1867, and was originally known from only five specimens, the last of which was collected in 1909 (Wilkinson 1961). The possum was named by Professor McCoy after John Leadbeater, the taxidermist at National Museum of Victoria (now Museum Victoria) who was responsible for mounting the first specimen. For many years the species was presumed to be extinct, until it was rediscovered in 1961 by Eric Wilkinson (Wilkinson 1961). With the assistance of a staff member from the Museum, Wilkinson and other members of the Field Naturalists Club of Victoria's Mammal Survey Group were able to find and collect a specimen east of Marysville (Rasmussen 2001; Wilkinson 1961). The possum species was made the Victorian State Faunal Emblem in 1971 (Victorian Government Website).

#### Description

The range of head and body length of Leadbeater's Possum is 150–170 mm, and its tail is 150–180 mm. An adult weighs 100–135 g in spring and 110–166 g in autumn. It is greyish brown above, paler below, and has a distinctive dark dorsal stripe from forehead to base of tail. The tail is club-shaped, being broader near the tip than at the base.

The possum is listed as 'endangered' in both the *Environment Protection and Biodiversity Conservation Act 1992 (EPBC Act)* and the IUCN Red list of Threatened Animals 2004 (Clayton *et al.* 2006). It is estimated that there are only 1000 individuals left in the wild. The

current decline in numbers is occurring because timber harvesting and bush fires are causing a decrease in the available habitat.

Leadbeater's Possum habitat consists of montane forest in the Victorian Central Highlands, with the canopy cover consisting of Mountain Ash *Eucalyptus regnans*, Alpine Ash *E. delegatensis* and Shining Gum *E. nitens*. These trees occur at altitudes of 400 – 1200 m. Some Leadbeater's Possums also are found in sub-alpine forest of Snow Gum *E. pauciflora* at altitudes of 1400 – 1500 m. There is a genetically distinct lowland population in Lowland Swamp Forest with Mountain Swamp Gum *E. camphora* at altitude 110 m.

Leadbeater's Possum requires hollow-bearing trees for nest sites. The possum particularly favours dead stags in an advanced state of decline, with the top of the tree having been removed.

#### Habits

Leadbeater's Possum's social structure is unique amongst mammals. Although for every three males there is only one female, it is the females that are dominant (Website: [australianfauna.com/leadbeaterspossum.php](http://australianfauna.com/leadbeaterspossum.php)). A nest is inhabited by a female, her mate, her offspring, and possibly other non-related males. The female will defend her nest from any female not related to her; males in the nest will assist in defense. Scent is used to recognise family members. It is also notable that family members will groom one another.

A Leadbeater's Possum reaches reproductive maturity at two years of age. Breeding is monogamous between a pair of Leadbeater's Possums and will remain that way for the entire

life span. Mating does not occur in January or February, but takes place throughout the rest of the year. During mating seasons the possums move quickly through the undergrowth and carry nesting material in their tails. The gestation period for a pregnant female is not known due to their habit of mating frequently. Litters comprise one or two young. The young are weaned from the mother by three months, and are forced (by their mother) to be independent at about one year of age.

### Diet

The main component of the Leadbeater's Possum diet is insects found under bark, and various forms of vegetation. The possum will use its teeth to slice open tree bark, which will then produce sap. In this way possums feed on the sap from wattles for carbohydrate and insects and spiders for protein. Protein makes up only 20% of its diet, but is essential for successful breeding (Strahan 1995).

### Friends of Leadbeater's Possum

Friends of Leadbeater's Possum (FLbP) was formed in 2004. The group's founder and inaugural president was Sera Blair, and she continued to serve in that capacity until late in 2012. The Friends group was established to give a voice to these elusive forest animals. The habitat of Leadbeater's Possum is impacted by timber harvesting (including salvage logging), bushfires, fire prevention activities (burn-offs and firebreaks), and climate change. FLbP aims to help Leadbeater's Possum survive in the wild by encouraging public awareness, supporting conservation efforts, providing nest boxes and emergency winter feeding, conducting research programs and effective conservation strategies and policies (FLbP website). The ways in which FLbP has pursued these aims since its formation are indicated in the following chronological listing.

#### 2006

FLbP undertook stagwatching on Mt Baw Baw on several nights during the summer. At the time, there was concern because the government wanted to put in fuel breaks in an area between Reefton and Cambarville, which would divide Leadbeater's Possum habitat. This would be disruptive to breeding between colonies

because these possums will not cross the fuel breaks on the ground.

FLbP also started the push for revision of Action Statements from the Recovery Team. On 24 July 2006 FLbP met with John Thwaites, Minister for Environment, Water and Victorian Communities at a Community Cabinet meeting with residents of the Yarra Ranges Shire (Premier's Department web archive). Sera Blair spoke to the Minister and remarked:

... if there is one key thing we can get across to you today it is that we want you to reconvene the LBP Recovery Team before the State election, to show the Victorian community that you are serious about conserving endangered species and saving our state faunal emblem.

And he did, in Oct 2006!

Also in that year:

- using a grant from *Australian Geographic*, Dan Harley started Project Possum. This meant that nest boxes could be installed in Leadbeater's Possum habitat, at a time when old hollow-bearing stags were beginning to collapse;
- the last two captive Leadbeater's Possums died at Healesville Sanctuary. There were no other captive specimens in Australia.

#### 2007

The creation of fuel breaks and sale of wood continued to be of great concern in the loss of Leadbeater's Possum habitat. FLbP referred this issue to the Federal *EPBC Act*. During the year FLbP provided assistance to Dan Harley with the installation of nest boxes for Project Possum.

A grant from the Threatened Species Network sponsored a Leadbeater's Possum habitat training weekend in Marysville. Seventeen volunteers visited sites in the Central Highlands and Yellingbo to be trained in recognising Leadbeater's Possum habitat. The trainers were Dan Harley and Steve Smith from the Department of Sustainability and Environment, Lachie McBurney from the Australian National University and Ray Gibson from the Field Naturalists Club of Victoria.

#### 2008

FLbP began the 'Adopt a nest box' project. This was immediately successful, with 24 boxes adopted by schools and individuals in the first two months. In further work during the

year, FLbP began an education program with schools, and provided education materials.

In other developments of relevance to FLbP's concerns during the year:

- The fuel breaks were allowed by Peter Garrett, the Federal Environment minister, and the Permanent Reserve was finalised by DSE so that the Action Statement could be renewed.
- The Green Carbon Report (Mackey *et al.* 2008), prepared by a team led by Professor David Lindenmayer at the Australian National University, found that Mountain Ash are the most carbon dense forests in the world. This alone should ensure their survival due to the importance of carbon stores to slowing climate change.

### 2009

In February, the Black Saturday bushfires burnt 43% of the permanent reserve and intensive salvage logging occurred. The population of Leadbeater's Possum dropped to an estimated 1000. On Lake Mountain, a small colony survived in a nest box in an unburnt gully. FLbP supported Parks Victoria with supplementary feeding of surviving possums on Lake Mountain. Following the fires they were fed twice a week, for four to six months per year for three years.

### 2010

Salvage coupes continued to clear burnt forests. Hundreds of new green coupes were approved for logging by VicForests. FLbP organised a tree planting in Yellingbo in response to die-back in Mountain Swamp Gum. An art show of wildlife was launched at the World Trade Centre. This raised \$10 000 and a new logo was created. On national Threatened Species Day (7 September), an event for schools was held at the World Trade Centre. A group of young students began the HELP Team—'Help the Endangered Leadbeater's Possum'. They raised thousands of dollars for nest boxes (by selling silicon bracelets inscribed with the words 'Help Endangered Leadbeater's Possums'), and raised awareness through media and events. Elly Robertson, the leader of the HELP team, was made Youth Ambassador.

### 2011

In February, FLbP mounted a display at the Sustainable Living Festival at Federation

Square, Melbourne, to publicise in the city the plight of Leadbeater's Possum. The Friends also helped The Wilderness Society promote the Ethical Paper Pledge. The 50th anniversary of the rediscovery of Leadbeater's Possum was celebrated at Melbourne Museum with a children's event and a rediscovery event in April, at which Eric Wilkinson presented Elly Robertson with a Mountain Ash seedling, symbolising the passing of care for Leadbeater's Possum from one generation to the next. The seedling was planted at the Cambarville Tree Planting Ceremony in September.

### 2012

My Environment, another volunteer-based organisation that aims to be a hub for up-to-date information on the widest range of environmental issues, launched a legal case against VicForests in the Supreme Court, over logging of endangered species' habitat (My Environment website). FLbP donated \$7000 toward the court costs.

FLbP received a grant from Communities for Nature, which enabled the group to employ two part-time consultants for forest awareness, as well as nest box monitoring with Project Possum.

Other occurrences during the year, in regard to Leadbeater's Possums, included:

- The surviving three specimens at Lake Mountain were moved into Healesville Sanctuary, after the other possums in the colony were taken by a feral cat;
- The Captive Breeding Program started at Healesville Sanctuary from the lowland population at Yellingbo;
- There was another tree planting in Yellingbo Nature Conservation Reserve;
- In September, David Lindenmayer resigned from the Recovery Team in protest at what he saw as government inaction in protecting Leadbeater's Possum habitat.

### Conclusion

Efforts by FLbP to ensure the survival of Victoria's faunal emblem consist of a combined approach involving FLbP Committee, members and supporters, My Environment Inc, Healesville Environment Watch Inc, The Wilderness Society, Australian National University, and Healesville Sanctuary.

However, despite all of the efforts made, Leadbeater's Possum still is in danger of becoming extinct within 30 years. If this occurs, the extinction of this emblematic animal will not be due to a lack of understanding of the biology of the possum—it has been studied for 30 years—but because of the Victorian government's inability to properly manage the possum's habitat.

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# Collaboration is the key: how partnerships can strengthen endangered species recovery

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## Abstract

In the world of threatened species recovery—or indeed any environmental effort—there seems to be an ever increasing amount to do and an ever decreasing amount of funding to achieve it with. As the number of threatened species increases, so too does a growing group of organisations, government bodies, recovery teams, catchment management authorities, park managers, zoos, universities and community groups wanting to focus their efforts on helping these species avoid extinction. Contained within these groups is an array of expertise on particular species, practical conservation knowledge, research and on-ground action that can benefit species in their fight for survival. However, many environmental groups often work independently as they strive to save species, competing with each other for funding and resources even though all have a common goal. In order to be effective in threatened species recovery, collaboration may hold the key. This article will explore Conservation Volunteers Australia's Wild Futures program as an example of how collaborative partnerships can strengthen efforts towards assisting the recovery of endangered species. (*The Victorian Naturalist* 130 (4) 2013, 177–181)

**Keywords:** collaboration, partnerships, Eastern Barred Bandicoot, threatened species recovery

## Introduction

It has been termed the 'Sixth Great Extinction Event'—the current timeframe in our planet's history of rapid and exceptional species loss across the globe—that's equivalent to catastrophic events such as ice ages and meteorite collisions (Eldredge 2001). Eminent biologist EO Wilson has made the dire prediction that half of the planet's flora and fauna species will become extinct by the turn of the 21st century (Wilson 2003).

Since European settlement, in Australia alone, at least 28 mammal species (including subspe-

cies), 4 amphibian species, and 23 bird species (including subspecies) have become extinct, as recognised under the *Environment Protection and Biodiversity Conservation Act 1992 (EPBC Act)* List of Threatened Fauna (Australian Government 1999). Increasing knowledge about the rapid loss of species stimulates ever increasing motivation by groups and individuals to make a positive change to try to prevent further species extinctions.

Whilst motivations and a multitude of actions to assist species in need are on the in-